

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): An output circuit comprising:

an output transistor an emitter of which is grounded, a base of which serves as an input node for a control current and a collector of which serves as an output node;

a base current supply section for supplying a base current to the output transistor according to an input signal ~~from an outside~~; and

a base current control section for detecting an inter-terminal voltage between the collector and emitter of the output transistor to control a base current supplied from the base current supply section so as not to cause the inter-terminal voltage to fall to a value lower than a predetermined constant voltage, wherein the base current control section ~~[[is]]~~comprises a comparator ~~[[with]]~~having the inter-terminal voltage and the predetermined constant voltage as a differential input.

Claim 2 (cancelled)

Claim 3 (currently amended): An output circuit according to claim 1, wherein

the base current control section further comprises an amplifier which amplifies a first control current obtained by splitting the base current supplied from the base current supply section according to the inter-terminal voltage to generate a second control current and, by splitting the second control current from the base current, controls the base current supplied to the input node.

Claim 4 (original): An output circuit according to claim 1, wherein

the base current control section supplies a first control current obtained by splitting the base current supplied from the base current supply section according to the inter-terminal voltage to the output transistor as a collector current thereof to thereby control the base current supplied to the input node.

Claim 5 (currently amended): An output circuit according to claim 1, wherein

the base current control section splits a first control current obtained by splitting the base current supplied from the base current supply section according to the inter-terminal voltage into at least two currents and one of the two currents is amplified by an amplifier to generate a second

control ~~circuit~~ current and, by splitting the second control current from the base current and supplying the other current to the output transistor as a collector current thereof, controls the base current supplied to the input node.

Claim 6 (original): An output circuit according to claim 1, wherein the output transistor is an NPN transistor.

Claims 7-8 (cancelled)

Claim 9 (currently amended): An output circuit according to claim [[2]]1, wherein the comparator is a PNP transistor.

Claim 10 (original): An output circuit according to claim 3 or 5, wherein the amplifier is a current mirror circuit.

Claim 11 (original): An output circuit according to claim 3 or 5, wherein the amplifier uses a current amplification action of a transistor.

Claim 12 (currently amended): An output circuit comprising:
an NPN output transistor an emitter of which is connected to a first power supply potential, a base of which serves as an input node for a control current, and a collector of which serves as an output node;

a PNP output transistor an emitter of which is connected to a second power supply potential, a base of which serves as an input node for a control current and a collector of which serves as an output node in common to the PNP output transistor and the NPN output transistor;

a first base current supply section for supplying a base current to the NPN output transistor according to an input signal ~~from an outside~~;

a first base current control section for detecting a first inter-terminal voltage between the collector and emitter of the NPN output transistor to control a base current supplied from the first base current supply section so as not to cause the first inter-terminal voltage to fall to a value lower than a first predetermined constant voltage;

a second base current supply section for supplying a base current to the PNP output transistor according to the input signal; and

a second base current control section for detecting a second inter-terminal voltage between the collector and emitter of the PNP output transistor to control a base current supplied from the second base current supply section so as not to cause the second inter-terminal voltage to fall to a value lower than a second predetermined constant voltage,

wherein the first base current control section includes a comparator having the first inter-terminal voltage and the first predetermined constant voltage as a differential input, and

the second base current control section includes a comparator having the second inter-terminal voltage and the second predetermined constant voltage as a differential input.